

Energy Science John Andrews And Nick Jelly

This major new book brings together leading researchers in the field in order to describe and analyse internationally significant theoretical and empirical work on offender supervision, and to address the policy and practice implications of this work within and across jurisdictions. Arising out of the work of the international Collaboration of Researchers for the Effective Development of Offender Supervision (CREDOS), this book examines questions and issues that have arisen both within effectiveness research, and from research on desistance from offending. The book draws out the lessons that can be learned not just about 'what works?', but about how and why particular practices support desistance in specific jurisdictional, cultural and local contexts. Key themes addressed in this book include: New directions in theory and paradigms for practice Staff skills and effective offender supervision Different issues and challenges in improving offender supervision The role of families, 'significant others' and social networks Understanding and supporting compliance within supervision Exploring the social, political, organisational and historical contexts of offender supervision Offender Supervision will be essential reading for academics, undergraduate and postgraduate students, policy makers, managers and practitioners interested in offender supervision.

This title addresses the component parts of the energy fuel cycle, as well as the market and government policies that oversee it. This Nutshell describe in detail the country's traditional energy policy and also discusses the current challenges that confront it. Chapters cover the individual natural resources used to produce energy and the book concludes with the development of a clean energy policy for the future.

"Our ambition with this book is that it helps transform at least a few inter-state water conflicts, by providing a lucid way to understand and to address their complex nature. The need for clarity is urgent, if researchers and analysts are to assist all those who are caught up in, and suffer from, water conflicts. While we wrote this book, mothers in Aleppo dodged snipers' bullets as they collected water for their children - just as so many mothers before them did, in Jenin in 2002, Sarajevo in 1994, Beirut in 1985, Leningrad in 1943, and Warsaw in 1944 and 1914. Explosive weaponry, designed to penetrate eighteen-inch thick concrete bunkers, ripped through the zinc roofs of several water treatment plants in Iraq; drinking water channels were demolished in Dombass; cholera spread through wastewater in Yemen, and superbugs mutated in the wastewater in Gaza. In most cases, the repair crews who risked their lives to supply clean water were denied access or shot at. The Bolivian Lake Poopó dried up as we were finishing the first draft of our early chapters. Caused by unregulated abstractions for agriculture and mining, this catastrophe evidences our collective inability to adequately manage human need for food and minerals, and human greed for money. However, it seems we have not learnt lessons from our past mistakes - rather we appear intent on repeating them. Lake Poopó has now joined the well-documented graveyard water bodies of Lake Urmia, Lake Tulare, the Oglala (or Ogallala) and Ceylanpinar Aquifers and the Dead Sea (and others counting). Each of these is an example of how tensions generated in the political and economic systems that run our lives can devastate our relationship and reliance upon the natural environment. Cambodia's Tonlé

Sap Lake - not to mention millions of its fish and thousands of local fishermen - is currently at risk because of upstream dams in Laos, Thailand and China (see Box Matthews). The likely outcome is that the monsoon-driven flood-pulse of the river is contained to such an extent that the Mekong river no longer washes back into the lake when it reaches the sea. This is a stark example of a worrying global trend, resulting from extensive construction of large dams building despite public-private-civil society consensus on their destructive downsides. Sea-land nutrients, which sea-to-river fish rely upon (most famously, salmon), have been virtually eliminated - with global nutrient flow standing at only 4% of historic levels. According to WWF, freshwater species' populations declined by 81% from 1970-2012, with an average annual decline of 3.9%"--

Everyone gets broken at some point. But how do we find power in that pain? Brokenness is a reality that every follower of Jesus experiences at some point on their journey, and it is in those moments of trial, pain, fear or failure that we look to the Lord for rescue and deliverance. We're grateful for the times He saves us from the valley, but what of the moments when we experience His salvation by walking with Him through the valley? This book doesn't ignore the reality of brokenness. Rather, it embraces it, while making a journey of faith to help us find power in the pain. So often we cry out to God to "deliver us from evil" because our natural human instinct longs to find the exit. But as numerous heroes of the faith will testify, walking through the valley is sometimes the only way out of it. Helen Roberts, Author of *Be Victorious and Be Fruitful*, from the foreword: "Like an uninvited houseguest, or even worse a midnight burglar, brokenness can bash its way into our lives. Unannounced. Unwelcome.

Unexpected. In *Beyond Broken*, John Andrews takes us on a profound journey where we can discover a new wholeness from our brokenness and find power, even in the pain of our lives." About the author: Dr John Andrews is an author, speaker and teacher with a passion to equip and inspire leaders, as well as empowering followers of Jesus into effective lifestyle and service.

Provides an overview of the sustainable energy crisis that is threatening the world's natural resources, explaining how energy consumption is estimated and how those numbers have been skewed by various factors and discussing alternate forms of energy that can and should be used.

Written with undergraduates and graduates in mind, this volume provides a thorough introduction to the economic, social, environmental and policy issues raised by current systems of energy use. The authors also describe the key physical and engineering features of these energy production systems.

In the second decade of each century, a new global order commonly starts to assert itself. In the 19th, Napoleon's defeat gave birth to the world of rivalrous European powers. In the 20th, the First World War triggered a wave of revolutions that cleared a path for the American era. Ours appears to be no different. The world is once again on the move: China extends its influence across the globe; Europe is struggling to maintain unity and the United States looks hollowed out by its own past adventures. Meanwhile Russia is up to a lot of startlingly bold new tricks. In this expanded new edition of *The World in Conflict*, John Andrews tackles head-on the reasons why global violence is ever-present in our lives. He analyses every single one of today's major conflicts region by region, considering the causes, contexts, participants, impacts and likely outcomes. He looks at recently-ended wars that

still spawn intermittent fighting. And he considers where, why and how new conflicts might erupt. This is a must-read for our interesting times, a guide to our new world of terrorism, kompromat and cyber war, shifting powers and enduring strife. If you want to know who is fighting where, for what, and whether they can win, *The World in Conflict* is indispensable.

Energy Science: Principles, Technologies, and Impacts integrates the science behind the key energy sources that are at our disposal today with the socioeconomic issues which surround their use to give a balanced, objective overview of the range of energy sources available to us today.

Brutalism had its origins in *béton brut* – concrete in the raw – and thus in the post-war work of Le Corbusier. The British architects Alison and Peter Smithson used the term "New Brutalism" from 1953, claiming that if their house in Soho had been built, "it would have been the first exponent of the 'New Brutalism' in England". Reyner Banham famously gave the movement a series of characteristics, including the clear expression of a building's structure and services, and the honest use of materials in their "as-found" condition. The Smithsons and Banham promoted the New Brutalism as ethic rather than aesthetic, privileging truth to structure, materials and services and the gritty reality of the working classes over the concerns of the bourgeoisie. But Brutalist architecture changed as it was taken up by others, giving rise to more sculptural buildings flaunting their raw materials, including off-form concrete, often in conjunction with bold structural members. While Brutalism fell out of vogue in the 1980s, recent years have seen renewed admiration for it. This volume is consistent with this broader resurgence, presenting new scholarship on Brutalist architects and projects from Skopje to Sydney, and from Harvard to Haringey. It will appeal to readers interested in twentieth-century architecture, and modern and post-war heritage. This book was originally published as a special issue of *Fabrications: the Journal of the Society of Architectural Historians, Australia and New Zealand*.

This is the first volume specifically dedicated to the consolidation and clarification of Heritage Studies as a distinct field with its own means of investigation. It presents the range of methods that can be used and illustrates their application through case studies from different parts of the world, including the UK and USA. The challenge that the collection makes explicit is that Heritage Studies must develop a stronger recognition of the scope and nature of its data and a concise yet explorative understanding of its analytical methods. The methods considered fall within three broad categories: textual/discourse analysis, methods for investigating people's attitudes and behaviour; and methods for exploring the material qualities of heritage. The methods discussed and illustrated range from techniques such as text analysis, interviews, participant observation, to semiotic analysis of heritage sites and the use of GIS. Each paper discusses the ways in which methods used in social analysis generally are explored and adapted to the specific demands that arise when applied to the investigation of heritage in its many forms. *Heritage Studies* is a seminal volume that will help to define the field. The global perspective and the shared focus upon the development of reflexive methodologies ensure that the volume explores these central issues in a manner that is simultaneously case-specific and of general relevance.

This book examines the terrorist networks that operate globally and analyses the long-term future of terrorism and terrorist-backed insurgencies. Terrorism remains a serious problem for the international community. The global picture does not indicate that the 'war on terror', which President George W. Bush declared in the wake of the 9/11 attacks, has been won. On the other hand it would be incorrect to

assume that Al Qaeda, its affiliates and other jihadi groups have won their so-called 'holy war' against the Coalition against Terrorism formed after 9/11. This new edition gives more attention to the political and strategic impact of modern transnational terrorism, the need for maximum international cooperation by law-abiding states to counter not only direct threats to the safety and security of their own citizens but also to preserve international peace and security through strengthening counter-proliferation and cooperative threat reduction (CTR). This book is essential reading for undergraduate and postgraduate students of terrorism studies, political science and international relations, as well as for policy makers and journalists.

This is a book by educators, for educators. It grapples with the complexities, the humanity and the possibilities in education. In a climate of competing accountabilities and measurement mechanisms; corporate solutions to education 'problems'; and narratives of 'failing' schools, 'underperforming' teachers and 'disengaged' students; this book asks 'What matters?' or 'What should matter?' in education. Based in the unique Australian context, this book situates Australian education policy, research and practice within the international education narrative. It argues that professionals within schools should be supported, empowered and welcomed into policy discourse, not dictated to by top-down bureaucracy. It advocates for a flipping, flattening and democratising of the education system, in Australia and around the world. *Flip the System Australia: What matters in education* brings together the voices of teachers, school leaders and scholars in order to offer diverse perspectives, important challenges and hopeful alternatives to the current education system.

This edited book explores how psychology can be used to improve our understanding of terrorism and counterterrorism. This work firstly aims to provide balanced and objective insight into the psychology of terrorists; what their motivations are, what keeps them involved in terrorist groups, and what eventually forces most to end their active involvement in terrorism. Secondly, the contributors focus on the challenging issue of how to respond to terrorism. These chapters provide information for those concerned with short-term tactical problems (e.g. interviewing), as well as those looking towards the more long-term strategic questions of bringing an entire terrorist campaign to an end. Ultimately, the individuals involved in terrorism require a more complex response from society than simply a quest for their apprehension. Believing inaccurate and misleading characterizations leads inevitably to damaging policies and deficient outcomes and campaigns of violence are needlessly prolonged. It is from this perspective that the concern arises with how researchers – and the policy makers guided by them – perceive the psychology of terrorists and of terrorism. This innovative book will be of great interest to students of terrorism and counterterrorism, security studies, psychology and politics, as well as security professionals and military colleges.

For centuries, scientists have dreamt of discovering an underlying unity to nature. Science now offers powerful explanations for both the dazzling diversity and striking similarities seen in the living world. Life is complicated. It is truly the "entangled bank" that Charles Darwin described. But scientists are now discovering that energy is the unifying force that joins all life on Earth. Visionary biologists have advanced a new theory that explains how the natural world—from the tiniest amoeba to the greatest rain forest—is constructed, providing a fresh perspective on the essential interconnectivity of living systems. This revolutionary theory explains a variety of phenomena—helping us understand why a shrew eats its bodyweight in food each day, why a mammal's heart beats about 1 billion times in its lifetime, why there are no trees as tall as the Eiffel Tower, and why more species live at the Earth's equator than at its poles. By looking at how living things use energy, we can answer these and myriad other intriguing questions. In *The Beat of a Heart* combines biography, history, science and nature writing to capture the exciting advances—and the people who are making them—that are triggering a revolution as potentially important to biology as Newton's insights were to physics.

A Dictionary of Energy Science covers terms related to energy technologies and their impact on the world's energy use. It sets out the principles behind each technology's operation, as well as its economic, environmental, and social impacts. Coverage includes energy demand and conservation, electricity generation and distribution, energy storage, renewable energy and fossil fuel technologies, nuclear energy, environmental issues, energy and society, and biographies of eminent energy scientists. Including more than 600 entries, the text is complemented by illustrations, a chronology, and global statistics on energy use. This topical dictionary appears at a time when the development of alternative technologies to fossil fuel is particularly important in trying to limit global warming, and is significantly affected by energy policy and politics. It is an essential resource for students of engineering, geography, and economics, and for professionals in energy-related industries.

This book focuses on improving outcomes where transportation needs and small animal habitats overlap. Exploring challenges and solutions from both transportation and ecological perspectives, the volume covers various themes including animal behavior related to roads, the impacts of roads in sensitive areas, and design approaches that mitigate the negative effects of highways on wildlife. The chapter authors -- from transportation experts to university researchers -- each promote the goal of realistic problem solving.

Energy Science: Principles, Technologies, and Impacts enables the reader to evaluate the key sources of energy available to us today on the basis of sound, quantitative understanding. Covering renewable, fossil fuel, and nuclear energy sources, the book relates the science behind these sources to the environmental and socioeconomic issues which surround their use to provide a balanced, objective overview. It also explores the practicalities of energy generation, storage, and transmission, to build a complete picture of energy supply, from wind turbines, nuclear reactors, or hydroelectric dams, to our homes.

This book provides a quantitative yet accessible overview of renewable energy engineering practice including wind, hydro, solar thermal, photovoltaic, ocean and bioenergy. Suitable for engineering undergraduates as well as graduate students from other numerate degrees, the text is supported by worked examples, tutorial chapters providing background material and end-of-chapter problems.

All too often, the words "computer validation" strike terror into the hearts of those new to the process and may even cause those familiar with it to tremble. Validating Pharmaceutical Systems: Good Computer Practice in Life Science Manufacturing delineates GCP, GLP, and GMP regulatory requirements and provides guidance from seasoned practitioners on how to fulfill them. John Andrews and his team tackle the perceived complexities surrounding the validation of a wide variety of automated systems. Sprinkled with case studies and real-life examples, the book offers a step-by-step review of topics such as planning, design, auditing, risk management, and specification. The in-depth, by example coverage demystifies the challenges of manufacturing execution systems(MES), laboratory information management systems(LIMS), and network qualification. The first section examines the different levels of automated systems used throughout the drug development, manufacture, and delivery lifecycle, using the GAMP 4 lifecycle approach to their validation. The second section uncovers some real-life applications of GAMP 4 to different areas of the regulations such as GLP, GCP, GMP, and GDP. The book explores some of the latest thinking on computer validation and reflects changes that have occurred in the industry since the early days of validation. The contributors are a deliberate blend of those who have faced the problems of the 1990s and the Y2K controversies and those who have more recently

arrived on the scene and made an impact on the perception of validation of automated systems across the field of GxP. They do more than show you how to do the right thing; they show you how to do the right thing in compliance with regulations.

As the events management field expands as an area of study, there is a need to move beyond the business and marketing-driven approaches which dominate the literature towards a more advanced conceptual analysis and understanding of events from a socio-cultural context. This book addresses this need by examining intersections between the social sciences and the emerging field of events management. It applies and specifically contextualises social science theories within the discourse of events to provide a greater understanding of the significance of events in contemporary society. It first outlines the value of approaching the study of events from a social science perspective, and then moves on to an in-depth exploration of relevant theories exploring topics such as identity, culture, consumerism, representation and place. It concludes with a summary of each chapter and a discussion of ways in which events can be further explored through the lens of the social sciences. The book features international case studies based on a variety of event types ranging from sports events, religious and cultural events and community events, which are used throughout to address contemporary issues and show theory in practice. 'Think Points' are integrated into each chapter to encourage the reader to reflect on theories, and each chapter concludes with summary points, further reading and links to useful websites to consolidate learning and further knowledge. This book will provide upper-level students, academics and researchers interested in events, as well as those from related social science disciplines, with a robust socio-cultural conceptual analysis of the subject and a greater understanding of the significance of events in contemporary society.

This dictionary covers terms related to energy technologies and their impact on the world's energy use. It sets out the principles behind each technology's operation, as well as its economic, environmental, and social impacts. Coverage includes energy demand and conservation, electricity generation and distribution, energy storage, renewable energy and fossil fuel technologies, nuclear energy, environmental issues, energy and society, and biographies of eminent energy scientists. The text is complemented by illustrations, a chronology, and global statistics on energy use.

The only book to successfully integrate social, economic and environmental considerations with an accessible, quantitative approach to energy science.

System Dynamics includes the strongest treatment of computational software and system simulation of any available text, with its early introduction of MATLAB and Simulink. The text's extensive coverage also includes discussion of the root locus and frequency response plots, among other methods for assessing system behavior in the time and frequency domains as well as topics such as function discovery, parameter estimation, and system identification techniques, motor performance evaluation, and system dynamics in everyday life.

This Handbook is the first volume to comprehensively analyse and problem-solve how to manage the decline of fossil fuels as the world tackles climate change and shifts towards a low-carbon energy transition. The overall findings are straight-forward and unsurprising: although fossil fuels have powered the industrialisation of many nations and improved the lives of hundreds of

millions of people, another century dominated by fossil fuels would be disastrous. Fossil fuels and associated greenhouse gas emissions must be reduced to a level that avoids rising temperatures and rising risks in support of a just and sustainable energy transition. Divided into four sections and 25 contributions from global leading experts, the chapters span a wide range of energy technologies and sources including fossil fuels, carbon mitigation options, renewables, low carbon energy, energy storage, electric vehicles and energy sectors (electricity, heat and transport). They cover varied legal jurisdictions and multiple governance approaches encompassing multi- and inter-disciplinary technological, environmental, social, economic, political, legal and policy perspectives with timely case studies from Africa, Asia, Australia, Europe, North America, South America and the Pacific. Providing an insightful contribution to the literature and a much-needed synthesis of the field as a whole, this book will have great appeal to decision makers, practitioners, students and scholars in the field of energy transition studies seeking a comprehensive understanding of the opportunities and challenges in managing the decline of fossil fuels.

Nanostructured materials, especially, 1D, 2D and 3D nanostructures, and their engineered architectures are being increasingly used due to their potential to achieve sustainable development in energy and environmental sectors, providing a solution to a range of global challenges. A huge amount of research has been devoted in the recent past on the fine-tuning of nano-architectures to accomplish innovations in energy storage and conversions, i.e., batteries, supercapacitors, fuel cells, solar cells, and electrochromic devices, bifunctional catalysts for ORR and OER, gas to fuels, liquid to fuels, and photocatalysts, corrosion, electrochemical sensors, and pollution and contaminants removal. *Nanomaterials for Sustainable Energy and Environmental Remediation* describes the fundamental aspects of a diverse range of nanomaterials for the sustainable development in energy and environmental remediation in a comprehensive manner. Experimental studies of various nanomaterials will be discussed along with their design and applications, with specific attention to various chemical reactions involving and their challenges for catalysis, energy storage and conversion systems, and removal of pollutants are addressed. This book will also emphasise the challenges with past developments and direction for further research, details pertaining to the current ground-breaking technology and future perspective with multidisciplinary approach on energy, nanobiotechnology and environmental science. Summarizes the latest advances in how nanotechnology is being used in energy and environmental science. Outlines the major challenges to using nanomaterials for creating new products and devices in the sustainable energy and environmental sectors. Helps materials scientists and engineers make selection and design decisions regarding which nanomaterial to use when creating new products and devices for energy and environmental applications.

Bethlem Hospital, popularly known as "Bedlam", is a unique institution. Now seven hundred and fifty years old, it has been continuously involved in the care of the mentally ill in London since at least the 1400s. As such it has a strong claim to be the oldest foundation in Europe with an unbroken history of sheltering and treating the mentally disturbed. During this time, Bethlem has transcended locality to become not only a national and international institution, but in many ways, a cultural and literary myth. *The History of Bethlem* is a scholarly history of this key establishment by distinguished authors, including Asa Briggs and Roy

Porter. Based upon extensive research of the hospital's archives, the book looks at Bethlem's role within the caring institutions of London and Britain, and provides a long overdue re-evaluation of its place in the history of psychiatry.

Since 2013, an organization called the Nonhuman Rights Project has brought before the New York State courts an unusual request—asking for habeas corpus hearings to determine whether Kiko and Tommy, two captive chimpanzees, should be considered legal persons with the fundamental right to bodily liberty. While the courts have agreed that chimpanzees share emotional, behavioural, and cognitive similarities with humans, they have denied that chimpanzees are persons on superficial and sometimes conflicting grounds. Consequently, Kiko and Tommy remain confined as legal "things" with no rights. The major moral and legal question remains unanswered: are chimpanzees mere "things", as the law currently sees them, or can they be "persons" possessing fundamental rights? In *Chimpanzee Rights: The Philosophers' Brief*, a group of renowned philosophers considers these questions. Carefully and clearly, they examine the four lines of reasoning the courts have used to deny chimpanzee personhood: species, contract, community, and capacities. None of these, they argue, merits disqualifying chimpanzees from personhood. The authors conclude that when judges face the choice between seeing Kiko and Tommy as things and seeing them as persons—the only options under current law—they should conclude that Kiko and Tommy are persons who should therefore be protected from unlawful confinement "in keeping with the best philosophical standards of rational judgment and ethical standards of justice." *Chimpanzee Rights: The Philosophers' Brief*—an extended version of the amicus brief submitted to the New York Court of Appeals in Kiko's and Tommy's cases—goes to the heart of fundamental issues concerning animal rights, personhood, and the question of human and nonhuman nature. It is essential reading for anyone interested in these issues.

Energy Science Principles, Technologies, and Impacts Oxford University Press

When we think of "climate change," we think of man-made global warming, caused by greenhouse gas emissions. But natural climate change has occurred throughout human history, and populations have had to adapt to the climate's vicissitudes. Anthony J. McMichael, a renowned epidemiologist and a pioneer in the field of how human health relates to climate change, is the ideal person to tell this story. *Climate Change and the Health of Nations* shows how the natural environment has vast direct and indirect repercussions for human health and welfare. McMichael takes us on a tour of human history through the lens of major transformations in climate. From the very beginning of our species some five million years ago, human biology has evolved in response to cooling temperatures, new food sources, and changing geography. As societies began to form, they too adapted in relation to their environments, most notably with the development of agriculture eleven thousand years ago. Agricultural civilization was a Faustian bargain, however: the prosperity and comfort that an agrarian society provides relies on the assumption that the environment will largely remain stable. Indeed, for agriculture to succeed, environmental conditions must be just right, which McMichael refers to as the "Goldilocks phenomenon." Global warming is disrupting this balance, just as other climate-related upheavals have tested human societies throughout history. As McMichael shows, the break-up of the Roman Empire, the bubonic Plague of Justinian, and the mysterious collapse of Mayan civilization all have roots in climate change. Why devote so much

analysis to the past, when the daunting future of climate change is already here? Because the story of mankind's previous survival in the face of an unpredictable and unstable climate, and of the terrible toll that climate change can take, could not be more important as we face the realities of a warming planet. This sweeping magnum opus is not only a rigorous, innovative, and fascinating exploration of how the climate affects the human condition, but also an urgent call to recognize our species' utter reliance on the earth as it is.

Market: energy professionals including analysts, system engineers, mechanical engineers, and electrical engineers Problems and worked-out equations use SI units

The Protestant Reformation of 1560 is widely acknowledged as being a watershed moment in Scottish history. However, whilst the antecedents of the reform movement have been widely explored, the actual process of establishing a reformed church in the parishes in the decades following 1560 has been largely ignored. This book helps remedy the situation by examining the foundation of the reformed church and the impact of Protestant discipline in the parishes of Fife. In early modern Scotland, Fife was both a distinct and important region, containing a preponderance of coastal burghs as well as St Andrews, the ecclesiastical capital of medieval Scotland. It also contained many rural and inland parishes, making it an ideal case study for analysing the course of religious reform in diverse communities. Nevertheless, the focus is on the Reformation, rather than on the county, and the book consistently places Fife's experience in the wider Scottish, British and European context. Based on a wide range of under-utilised sources, especially kirk session minutes, the study's focus is on the grass-roots religious life of the parish, rather than the more familiar themes of church politics and theology. It evaluates the success of the reformers in affecting both institutional and ideological change, and provides a detailed account of the workings of the reformed church, and its impact on ordinary people. In so doing it addresses important questions regarding the timescale and geographical patterns of reform, and how such dramatic religious change succeeded and endured without violence, or indeed, widespread opposition.

Leading experts addresses the effectiveness of policy delivery in energy and the environment International experts from a range of disciplines, including the sciences, law, politics, economics and engineering, examine how best to achieve energy policy objectives. From evaluating policy delivery on wind farms in Texas in the US to developing nuclear power in the Middle East, this book presents fresh thinking on key concepts and ideas on energy law and policy delivery in a concise and readable format.

This compelling book focuses on fundamental trends called "megatrends", which are great forces in societal development that have a profound impact on states, markets and civil society today and in the future.

The only book to successfully integrate social, economic and environmental considerations with an accessible, quantitative approach to energy science. Energy Science introduces the latest energy technologies, explaining the physical principles underlying technology and discussing their environmental, economic, and social impacts. Covering fossil fuels, renewable, and nuclear energy, the text enables students to evaluate the key sources of energy available, and introduces potential solutions to the energy problems facing us today. A core text in the field, Energy Science is full of topical case studies and examples using current

data to highlight the practical application of relevant theory. Discussion questions throughout the text encourage the development of deep critical thinking skills, ensuring that students are properly equipped to approach the energy challenges that lie ahead. Energy Science is accompanied by an Online Resource Centre which features: For Students: * Auto-marked multiple choice questions to accompany each chapter * Curated links to online sources of further information For Lecturers: * Figures from the book: available to download for use in lectures * A solutions manual for end-of-chapter questions * A complete set of customizable PowerPoint slides to use as the basis for lectures, or as hand-outs in class

The definitive introduction to the behavioral insights approach, which applies evidence about human behavior to practical problems. Our behavior is strongly influenced by factors that lie outside our conscious awareness, although we tend to underestimate the power of this “automatic” side of our behavior. As a result, governments make ineffective policies, businesses create bad products, and individuals make unrealistic plans. In contrast, the behavioral insights approach applies evidence about actual human behavior—rather than assumptions about it—to practical problems. This volume in the MIT Press Essential Knowledge series, written by two leading experts in the field, offers an accessible introduction to behavioral insights, describing core features, origins, and practical examples. Since 2010, these insights have opened up new ways of addressing some of the biggest challenges faced by societies, changing the way that governments, businesses, and nonprofits work in the process. This book shows how the approach is grounded in a concern with practical problems, the use of evidence about human behavior to address those problems, and experimentation to evaluate the impact of the solutions. It gives an overview of the approach's origins in psychology and behavioral economics, its early adoption by the UK's pioneering “nudge unit,” and its recent expansion into new areas. The book also provides examples from across different policy areas and guidance on how to run a behavioral insights project. Finally, the book outlines the limitations and ethical implications of the approach, and what the future holds for this fast-moving area.

Poetical Matter examines the two-way exchange of language and methods between nineteenth-century poetry and the physical sciences. The book argues that poets such as William Wordsworth, Mathilde Blind, and Thomas Hardy identified poetry as an experimental investigation of nature's materiality. It also explores how science writers such as Humphry Davy, Mary Somerville, and John Tyndall used poetry to formulate their theories, to bestow cultural legitimacy on the emerging disciplines of chemistry and physics, and to communicate technical knowledge to non-specialist audiences. The book's chapters show how poets and science writers relied on a set of shared terms (“form,” “experiment,” “rhythm,” “sound,” “measure”) and how the meaning of those terms was debated and reimagined in a range of different texts. “A stimulating analysis of nineteenth-century poetry and physics. In this groundbreaking study, Tate turns to sound to tease out fascinating continuities across scientific inquiry and verse. Reflecting that ‘the processes of the universe’ were themselves ‘rhythmic,’ he shows that a wide range of poets and scientists were thinking through undulatory motion as a space where the material and the immaterial met. ‘The motion of waves,’ Tate demonstrates, was ‘the exemplary form in the physical sciences.’ Sound waves, light, energy, and poetic meter were each

characterized by a 'process of undulation,' that could be understood as both a physical and a formal property. Drawing on work in new materialism and new formalism, Tate illuminates a nineteenth-century preoccupation with dynamic patterning that characterizes the undulatory as (in John Herschel's words) not 'things, but forms.'" —Anna Henchman, Associate Professor of English at Boston University, USA "This impressive study consolidates and considerably advances the field of physics and poetry studies. Moving easily and authoritatively between canonical and scientist poets, *Nineteenth-Century Poetry and the Physical Sciences* draws scientific thought and poetic form into telling relation, disclosing how they were understood variously across the nineteenth century as both comparable and competing ways of knowing the physical world. Clearly written and beautifully structured, *Nineteenth-Century Poetry and the Physical Sciences* is both scholarly and accessible, a fascinating and indispensable contribution to its field." —Daniel Brown, Professor of English at the University of Southampton, UK "Essential reading for Victorianists. Tate's study of nineteenth-century poetry and science reconfigures debate by insisting on the equivalence of accounts of empirical fact and speculative theory rather than their antagonism. The undulatory rhythms of the universe and of poetry, the language of science and of verse, come into new relations. Tate brilliantly re-reads Coleridge, Tennyson, Mathilde Blind and Hardy through their explorations of matter and ontological reality. He also addresses contemporary theory from Latour to Jane Bennett." — Isobel Armstrong, Emeritus Professor of English at Birkbeck, University of London, UK

The second book in The Outlaw Preacher series finds James, aka Nine Ball facing intense spiritual and physical warfare from page one! There is no grace period from Outlaw to Evangelist and the enemy is a sore loser. The preacher is the target and the collateral damage begins immediately. This is hard core evangelism and it's not for the closet Christian or mamby pamby wishy washy, it's for contemporary warriors who recognize that we've been called to fight evil in our world. The Outlaw Preacher is a rough character who lives and loves at high speed. You will either love or hate this guy, but you cannot deny his love for the Lord or his woman, nor his devotion to his club.

A comprehensive and unified introduction to the science of energy sources, uses, and systems for students, scientists, engineers, and professionals.

The provision of sustainable energy supplies for an expanding and increasingly productive world is one of the major issues facing civilisation today. *Renewable Energy* examines both the practical and economic potential of the renewable energy sources to meet this challenge. The underlying physical and technological principles behind deriving power from direct solar (solar thermal and photovoltaics), indirect solar (biomass, hydro, wind and wave) and non-solar (tidal and geothermal) energy sources are explained, within the context of their environmental impacts, their economics and their future prospects. *Renewable Energy* provides both perspective and detail on the relative merits and state of progress of technologies for utilizing the various 'renewables'. The analysis considers emissions, sustainability, cost implications and energy security, as political and economic pressures move society towards a low-carbon future. From an overview of basic energy conversion processes, through a discussion of the individual renewable sources, to a concluding examination of the prospects for their integration into national and international

networks and the outlook for renewable energy, this book provides a valuable insight into prospects for the renewables. Online Resource Centre: Renewable Energy is accompanied by an Online Resource Centre which features: For students: * Auto-marked multiple choice questions to accompany each chapter * Curated links to further information and up-to-date energy statistics. For registered adopters of the book: * Figures from the book: available to download for use in lectures

Football is unquestionably the world's most popular and influential sport. There is no corner of the globe in which the game is not played or followed. More countries are affiliated to FIFA, football's governing body, than to the United Nations. The sport has therefore become an important component of our social, cultural, political and economic life. The Routledge Handbook of Football Studies is a landmark work of reference, going further than any other book in considering the historical and contemporary significance of football around the world. Written by a team of leading sport scholars, the book covers a broad range of disciplines from history, sociology, politics and business, to philosophy, law and media studies. The central section of the book examines key themes and issues in football studies, such as the World Cup and international competition, governance and ownership, fandom and celebrity. The concluding section offers in-depth surveys of the culture and organisation of football in each of the regional confederations, from UEFA to CONCACAF. This book will be fascinating reading for any serious football fan and an essential resource for advanced students or scholars undertaking research in football or sport studies, and any practitioner or policy-maker working in football.

Entries include: Absurdism, Altruism, Antidisestablishmentarianism, Atheism, Bohemianism, Bonapartism, Buddhism, Capitalism, Careerism, Chauvinism, Colonialism, Cubism, Darwinism, Defeatism, Deism, Determinism, Eclecticism, Epicureanism, Eurocentrism, Expressionism, Fanaticism, Feminism, Freeganism, Freudianism, Futurism, Germanism, Globalism, Gnosticism, Hedonism, Heightism, Historicism, Hitlerism, Humanitarianism, Idealism, Imperialism, Institutionalism, Islamism, Isolationism, Jacksonianism, Jingoism, Judaism, Keynesianism, Lancastrianism, Leninism, Libertarianism, Localism, Maoism, Masculism, Mazdaism, Militarism, Modernism, Multiculturalism, Nazism, Neoconservatism, Nihilism, Nudism, Optimism, Orientalism, Paganism, Pan-Africanism, Phallocentrism, Poststructuralism, Quietism, Racism, Rastafarianism, Realism, Republicanism, Romanticism, Sikhism, Stoicism, Structuralism, Surrealism, Symbolism, Teatism, Taoism, Thatcherism, Unionism, Utilitarianism, Veganism, Vegetarianism, White Nationalism, Zionism, Zoroastrianism.

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